

**The invention claimed is:**

- 1        1. A communication method, comprising the steps of:  
2              encoding a pilot signal using a plurality of codes to produce a plurality of encoded pilot  
3              signals, the plurality of codes having at least a first and a second code where each of the plurality  
4              of codes are different, and the plurality of encoded pilot signals having at least a first and a  
5              second encoded pilot signal; and  
6              transmitting each of the plurality of encoded pilot signals on a different antenna.
- 1        2. The method of claim 1, wherein the plurality of encoded pilot signals are transmitted  
2              substantially simultaneously.
- 1        3. The method of claim 1, wherein the plurality of codes are orthogonal.
- 1        4. The method of claim 3, wherein the plurality of codes are Walsh codes.
- 1        5. The method of claim 3, wherein the plurality of encoded pilot signals are transmitted  
2              substantially simultaneously.
- 1        6. A communication method, comprising the steps of:  
2              encoding a pilot signal using a first code to produce a first encoded pilot signal;  
3              encoding the pilot signal using a second code to produce a second encoded pilot signal,  
4              where the first and second codes are different; and  
5              transmitting the first and second encoded pilot signals on different antennas.
- 1        7. The method of claim 6, wherein the first and second encoded pilot signals are  
2              transmitted substantially simultaneously.
- 1        8. The method of claim 6, wherein the first and second codes are orthogonal.
- 1        9. The method of claim 8, wherein the first and second codes are Walsh codes.
- 1        10. The method of claim 8, wherein the first and second encoded pilot signals are  
2              transmitted substantially simultaneously.

1        11. A communication method, comprising the steps of:  
2            encoding a carrier signal using a plurality of codes to produce a plurality of encoded  
3            carrier signals, the plurality of codes having at least a first and a second code where each of the  
4            plurality of codes are different, and the plurality of encoded carrier signals having at least a first  
5            and a second encoded carrier signal; and  
6            transmitting each of the plurality of encoded carrier signals on a different antenna.

1        12. The method of claim 11, wherein the plurality of encoded carrier signals are  
2            transmitted substantially simultaneously.

1        13. The method of claim 11, wherein the plurality of codes are orthogonal.

1        14. The method of claim 13, wherein the plurality of codes are Walsh codes.

1        15. The method of claim 13, wherein the plurality of encoded carrier signals are  
2            transmitted substantially simultaneously.

1        16. A communication method, comprising the steps of:  
2            encoding a carrier signal using a first code to produce a first encoded carrier signal;  
3            encoding the carrier signal using a second code to produce a second encoded carrier  
4            signal, where the first and second codes are different; and  
5            transmitting the first and second encoded carrier signals on different antennas.

1        17. The method of claim 16, wherein the first and second encoded carrier signals are  
2            transmitted substantially simultaneously.

1        18. The method of claim 16, wherein the first and second codes are orthogonal.

1        19. The method of claim 18, wherein the first and second codes are Walsh codes.

1        20. The method of claim 18, wherein the first and second encoded carrier signals are  
2            transmitted substantially simultaneously.